GM Probes

EWGM | SWGM | ECPGM, PGM, APGM, LPGM and TPGM | Comparison tables

See also: Low Energy Gamma Probe | Sodium Iodide probes

GP14 Ambient Dose Equivalent Probe

Sensitive dose equivalent GM detector fitted with build-up source, suited for use with GA Gamma Alarm or GI Gamma Interlock Monitor.

- Range 0.1 µSv/h to 1 mSv/h
- Connector: LEMO (ERA 1E250CTL)
- GP14A: Aluminium housing
- GP14B: Stainless steel housing

GP15 Ambient Dose Equivalent Probe

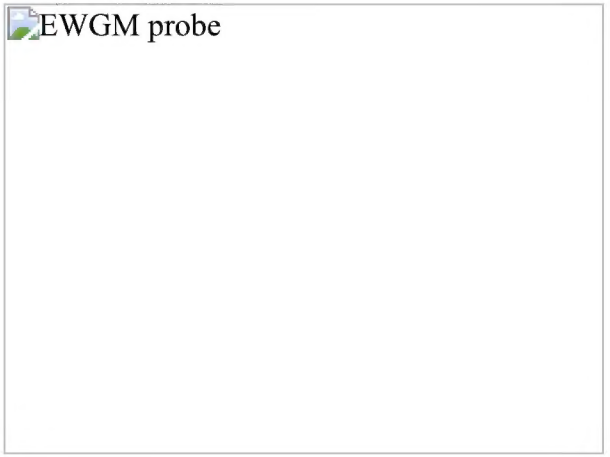
Sensitive dose equivalent GM detector fitted with build-up source, suited for use with GA Gamma Alarm or GI Gamma Interlock Monitor.

- Range 10 µSv/h to 100 mSv/h
- Connector: LEMO (ERA 1E250CTL)
- GP15A: Aluminium housing
- GP15B: Stainless steel housing

EWGM End Window GM Probe

A small end window GM probe responding to alpha, beta and gamma radiations.

- 6.8 cm^2 end window with protective screen
- Responds to alpha (>3 MeV), beta (>45 keV), and gamma (>6 keV)
- Higher energy gammas also detected through the probe walls
- Operates at 900 V
- Connector: MHV
- Check source: CK-1.



SWGM Side Window GM Probe

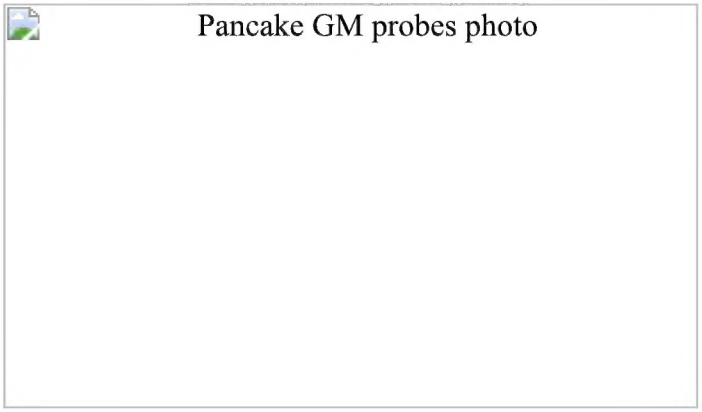
A side window probe that incorporates a sliding housing. SWGM detects high energy beta and gamma with the side window exposed but gamma only when the slide is closed to shield the GM tube.

- Flat energy response with GM shielded
- Operates at 900 V
- Connector, MHV
- Check source: CK-1.

ECPGM, PGM, APGM, LPGM and TPGM Pancake GM Probes

This range of GM pancake probes respond to alpha, beta and gamma radiations. They have housings with different types of back shielding for use in elevated background. The ECPGM's detachable energy compensation shield lets you convert the response from count rate to gamma dose rate. The ECPGM is matched to the Surveyor 2000E.

- 15.5 cm^2 radiation window protected by fine mesh BeCu screen
- 1.4 to 2 $mg.cm^{-2}$ window density
- 900 V fixed high voltage
- Connector: MHV
- Check source: CK-1.
- Aluminium back shielding -APGM
- Lead back shielding -LPGM
- Tungsten back shielding -TPGM



Comparison Tables

Order Code	137Cs Gamma Efficiency	Response					Dead Time	Weight
	cps per mSv/h	Beta	Neutron	Polar (137Cs) 100% side on				kg
		$^{90}Sr/^{90}Y$	$^{241}Am/Be$	0 - 45°	45° - 70°	70° - 90°		
GP14A	1700	< 0.01%*	19 cps per mSv/h	> 93%	> 86%	> 76%	80µs typ.	0.175
GP14B	1670	< 0.01%*	19 cps per mSv/h	> 95%	> 80%	> 78%	80µs typ.	0.340
GP15A	140	< 0.001%*	1.3 cps per mSv/h	> 96%	> 92%	> 87%	13µs typ.	0.175
GP15B	137	< 0.001%*	0.4 cps per mSv/h	> 94%	> 89%	> 87%	13µs typ.	0.340

* % of Beta emission rate (point source placed upon Geiger centre mark on probe housing)

Order Code	137Cs Gamma Efficiency	**Efficiencies** (% Surface Emission)	Dead Time	60Co Shielding	Weight

	cpm per 100µR/h	Alpha		Beta				rel. to PGM	kg	lb
		^{230}Th	^{14}C	^{147}Pm	^{99}Tc	$^{90}Sr/^{90}Y$				
EWGM	1750	0%	10%	20%	30%	35%	200µs	n/a	0.15	0.31
SWGM	1600					15%	100µs	n/a	0.22	0.48
PGM/ECPGM	3600	50%	10%	20%	30%	45%	50µs	n/a	0.33	0.72
APGM	3600	50%	10%	20%	30%	45%	50µs	1:1	0.70	1.25
LPGM	3600	50%	10%	20%	30%	45%	50µs	3:1	1.47	3.25
TPGM	3600	50%	10%	20%	30%	45%	50µs	4:1	1.90	4.25